



# Linked Answers for Smarter Cities

SMWCon Fall 2012 - Cologne  
Oct 26, 2012

Joel Natividad  
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@jqnatividad

# CROWDKNOWING



Human-powered,  
Machine-accelerated,  
Collective Knowledge Systems





 **NYC Big Apps 3.0**

Grand Prize Winner  
April 17, 2012





2011 AWARD



WHO

## Large Organization Award

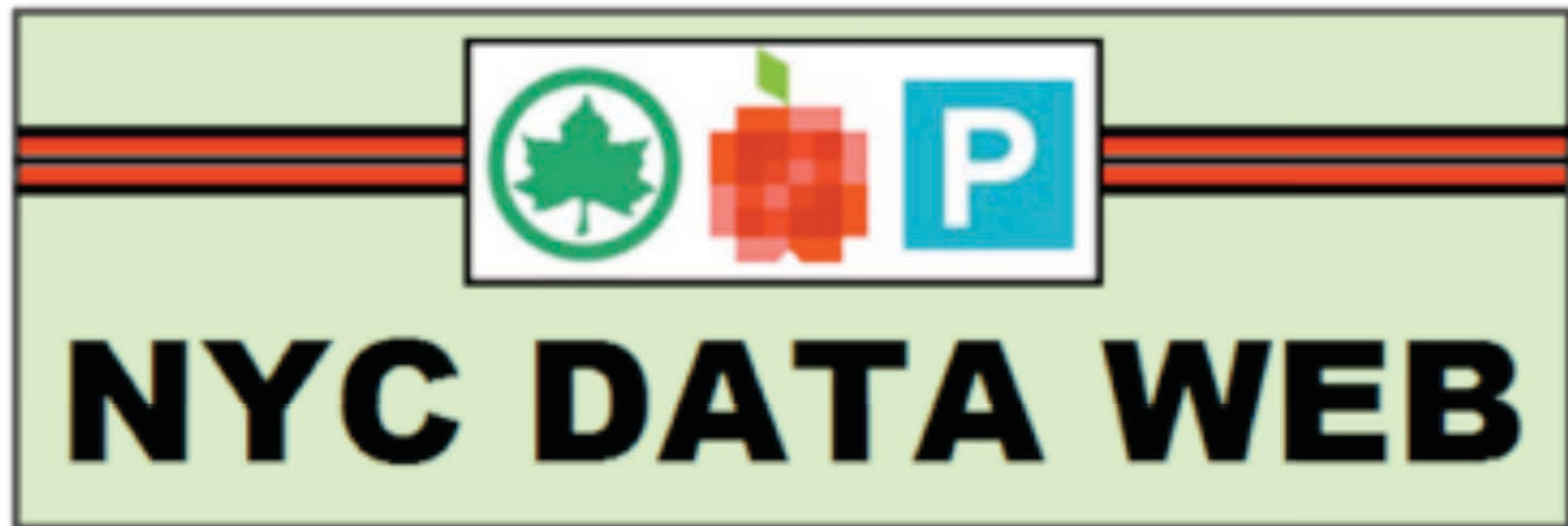
March 31, 2011



**NYC DATA WEB**







Semantic  
Open Data Federator

2011



**Semantic  
Metadata Repository**

**2012**





**“Smarter City” Platform**

**2013 and Beyond**

# Story about NYC Open Data



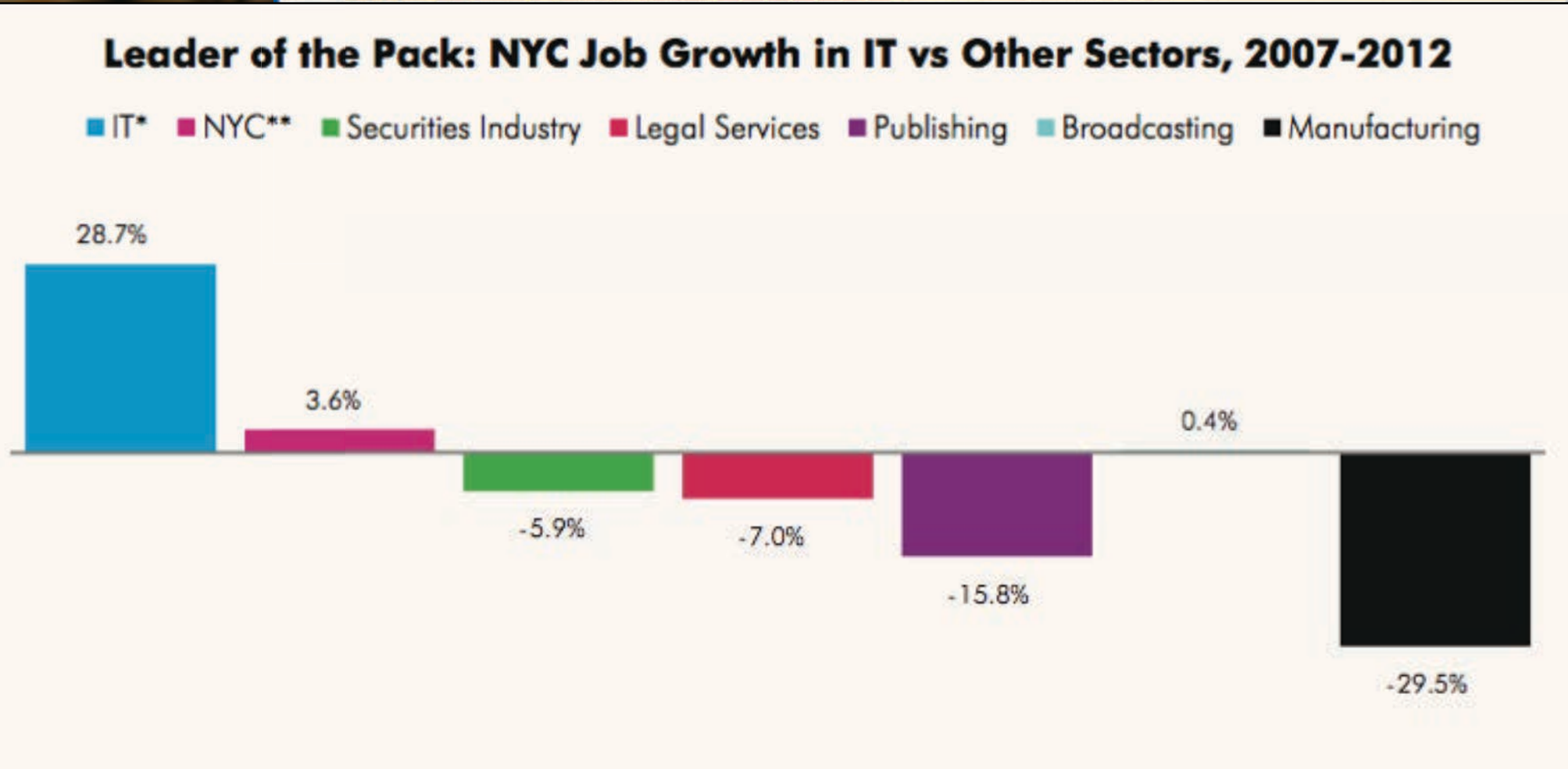


**NEW YORK**





The Original Data Geek



Source: NYS Department of Labor. Data is for February 2007 and February 2012. IT jobs are measured by "computer systems design and related services". NYC jobs include only private sector jobs.





**50 million visitors** a year

**\$ 1.28 Trillion**

Gross Metropolitan Product  
([Greyhill Advisors](#))

**10,630 people/km<sup>2</sup>**

City Density

**8.4 Million**

City population

**\$ ~325M**

DoITT Annual Budget

**18.9 Million**

Metro NYC population

**Fastest growing Tech Industry**

“[New Tech City](#)” (Center for an Urban Future)

de facto **Capital of the World**

WHY NYC?



# NYC's Landmark Open Data Law

Mar 7, 2012

## Local Law 11, § 23-505:

“

...publishing of **public data sets in raw or unprocessed form** through a single web portal by city agencies for the purpose of making public data available to the **greatest number of users** and for the greatest number of applications and shall, whenever practicable, use open standards for web publishing and e-government.

”

*Michael R. Bloomberg*



# The Global Hub of several Data-Driven Industries.

# Tech

# Residents

# Media

# Tourists

# Bioscience

# Visitors

# Fashion

# Governments

# Edutech

# NGOs

# Industrial

# Researchers

# Financial Services

# DATA GOTHAM

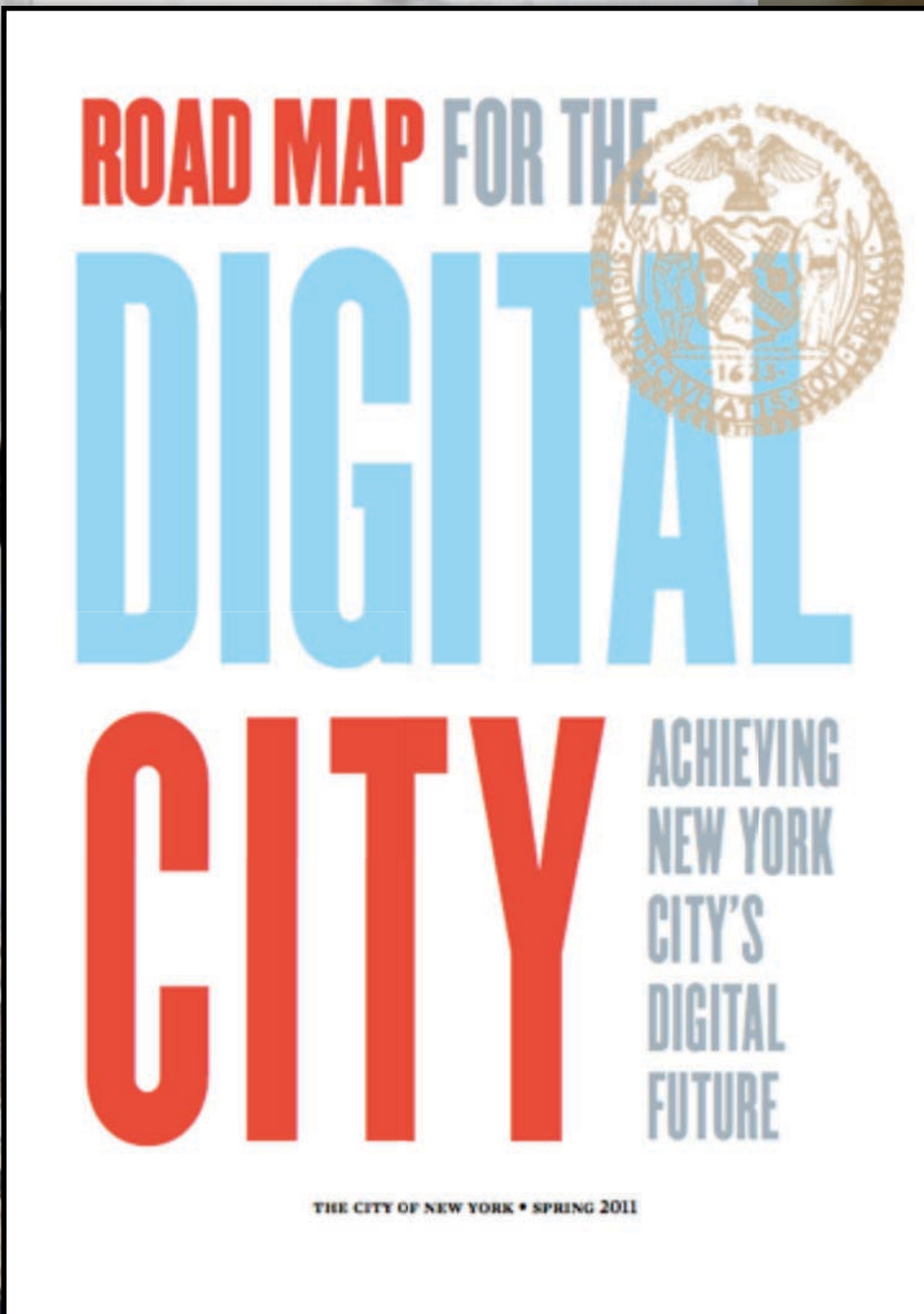
## EMPIRE STATE OF DATA

```

80 = 89.60, 01
1392, 02 = -8.738, VA
R(A) uA = uAT +
y() = 87x() + +
90 = 89.60, 01 = 0.1392, 02 = -8.738, VA(R) uA = uAT u(A
y() = 87x() + y() log L() w() x () - x/2) M() = 0.1392, 00 = 89.60,
y() 0.1392, 02 = -8.738, VA(R) uA = uAT u(A + y) = uA + uB u A = u(A
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y() log L() w() x () - x/2) M() =
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90 = 89.60,
01 = 0.1392, 02
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- 0.1392, 00 = 8
y() = 87x()

```

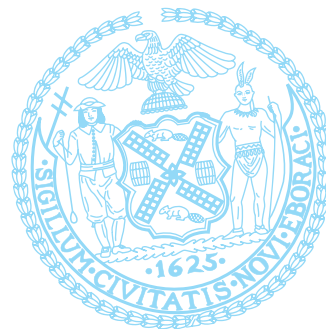








NEW YORK CITY'S  
**DIGITAL ROADMAP**



**PROGRESS & INNOVATION**

THE CITY OF NEW YORK AUGUST 2012





# Made In NY Digital Map

[+ Add Your Company](#)
**NYC**  
Digital

**INTERNET**  
WEEK  
NEW YORK

**NYC** All Companies

Digital Companies

Investors

Coworking / Incubator Spaces

Companies that are hiring

 Search companies...

 **10 Gen**  
578 Broadway  
We are hiring!

 **10 Speed Labs**  
300 Graham Avenue

 **1stdibs.com**  
156 Fifth Avenue  
We are hiring!

 **20x200**  
568 Broadway  
We are hiring!

 **2tor Inc.**  
60 Chelsea Piers

 Number of Tech Companies in Area  
2-9 10-99 100+

Google

Map data ©2012 Google, Sanborn - Terms of Use Report a map error

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[Home](#)[Connect](#)[Discover](#)[Me](#)**Joel Natividad** @jqnatividad

27 Jun

At Bloomberg Towers for #NYBDM - quite fancy! Can't help but think of Stark Towers. Now if only @MikeBloomberg buys his own island...

[Expand](#)**Joel Natividad** @jqnatividad

27 Jun

@drluckyspin likens Big Data developer experience to "redneck architecture" - [bit.ly/KNxe05](http://bit.ly/KNxe05) #nybdm

[Expand](#)**Rachel Sterne Haot** @rachelhaot

11 Jun

Interested in the raw data behind the @madeinny digital jobs map? Download it on @nycgov open data site: [bit.ly/LkGZ4Y](http://bit.ly/LkGZ4Y)

[Expand](#)**Joel Natividad** @jqnatividad

20 Jun

@rachelsterne @MadeinNY @nycgov Yep! So interested that we did a faceted-search remix. Check out: [remappedinny.com](http://remappedinny.com)

🗨 Hide conversation ↩ Reply 🗑 Delete ★ Favorite

1:20 PM - 20 Jun 12 · Details

**Joel Natividad** @jqnatividad

20 Jun

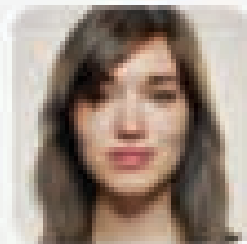
Check out our faceted search remix of "Made in NY Digital Map" mappedinny.com - [remappedinny.com](http://remappedinny.com) #newtechcity #nyc

[Expand](#)**Manu Sporny** @manusporny

18 Jun

Intro to Linked Data explains Google's Knowledge Graph & Facebook's Open Graph (video): [ow.ly/bCXZ4](http://ow.ly/bCXZ4) #rdfa #jsonld #seo





**Rachel Sterne Haot** @rachelhaot

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Reply to @jqnatividad @rachelsterne @MadeinNY @nycgov

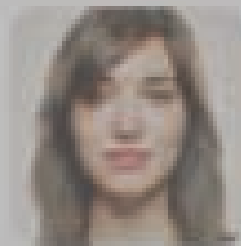


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[mappedinny.com](http://mappedinny.com) - [remappedinny.com](http://remappedinny.com) #newtechcity #nyc

Expand



**Rachel Sterne Haot** @rachelhaot

11 Jun

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[mappedinny.com](http://mappedinny.com) - [remappedinny.com](http://remappedinny.com) #newtechcity #nyc

Expand



# ReMapped In New York Digital Map (BETA)

A [Faceted Search remix](#) of the [Made in NY Digital Map](#).

Search

Hiring

859 FALSE

963 TRUE

Borough

11 Bronx

205 Brooklyn

1559 Manhattan

22 Queens

10 Staten Island

Category

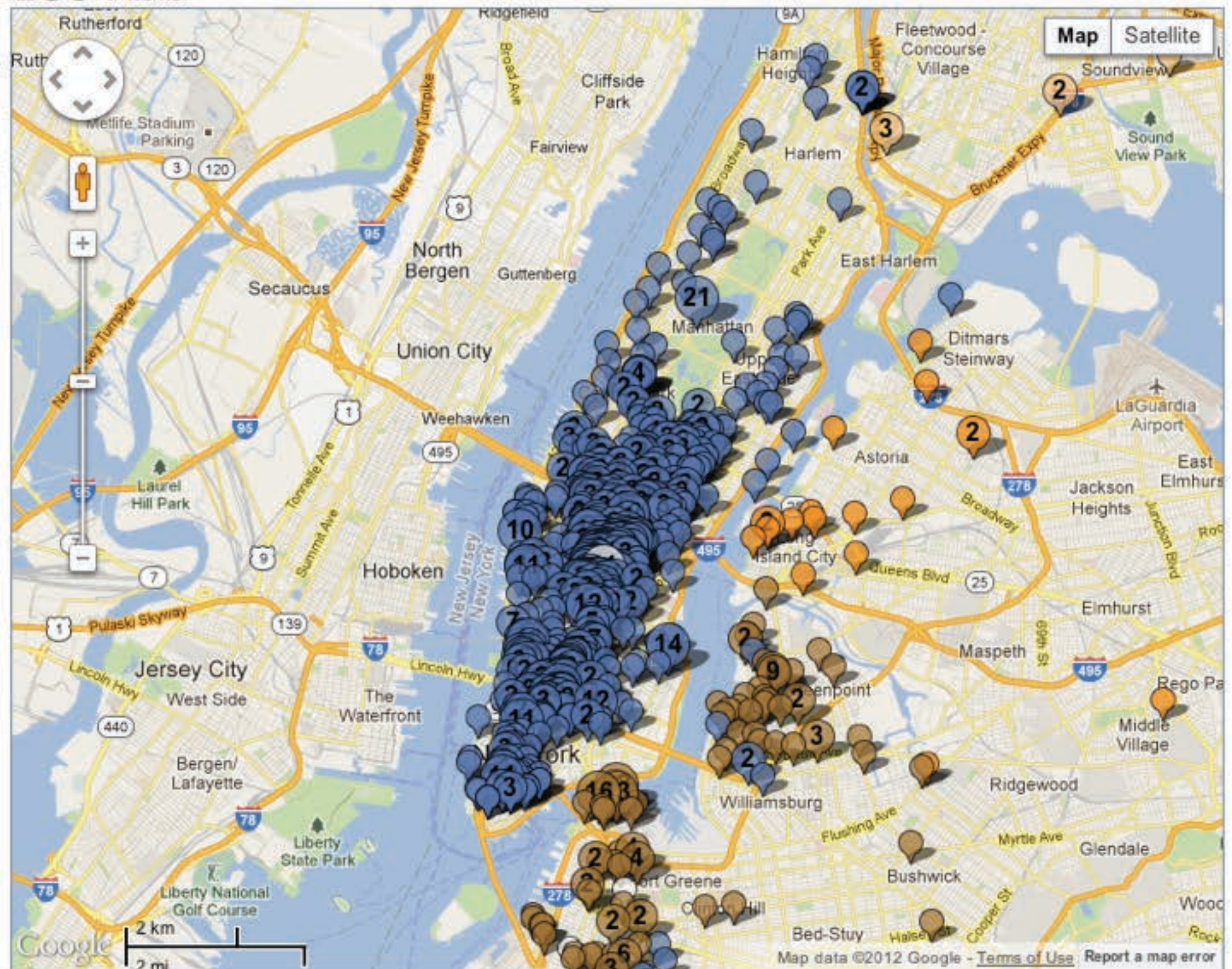
69 Coworking /  
Incubators

1669 HQ'd in NY

70 Investors

MAP • TILE • LIST

1804 Items



○ Bronx ○ Brooklyn ○ Manhattan ○ Queens ○ Staten Island ○ mixed



# ReMapped In New York Digital Map (BETA)

A [Faceted Search remix](#) of the [Made in NY Digital Map](#).

## Search

## Hiring

859 FALSE

963 TRUE

## Borough

11 Bronx

205 Brooklyn

1559 Manhattan

22 Queens

10 Staten Island

## Category

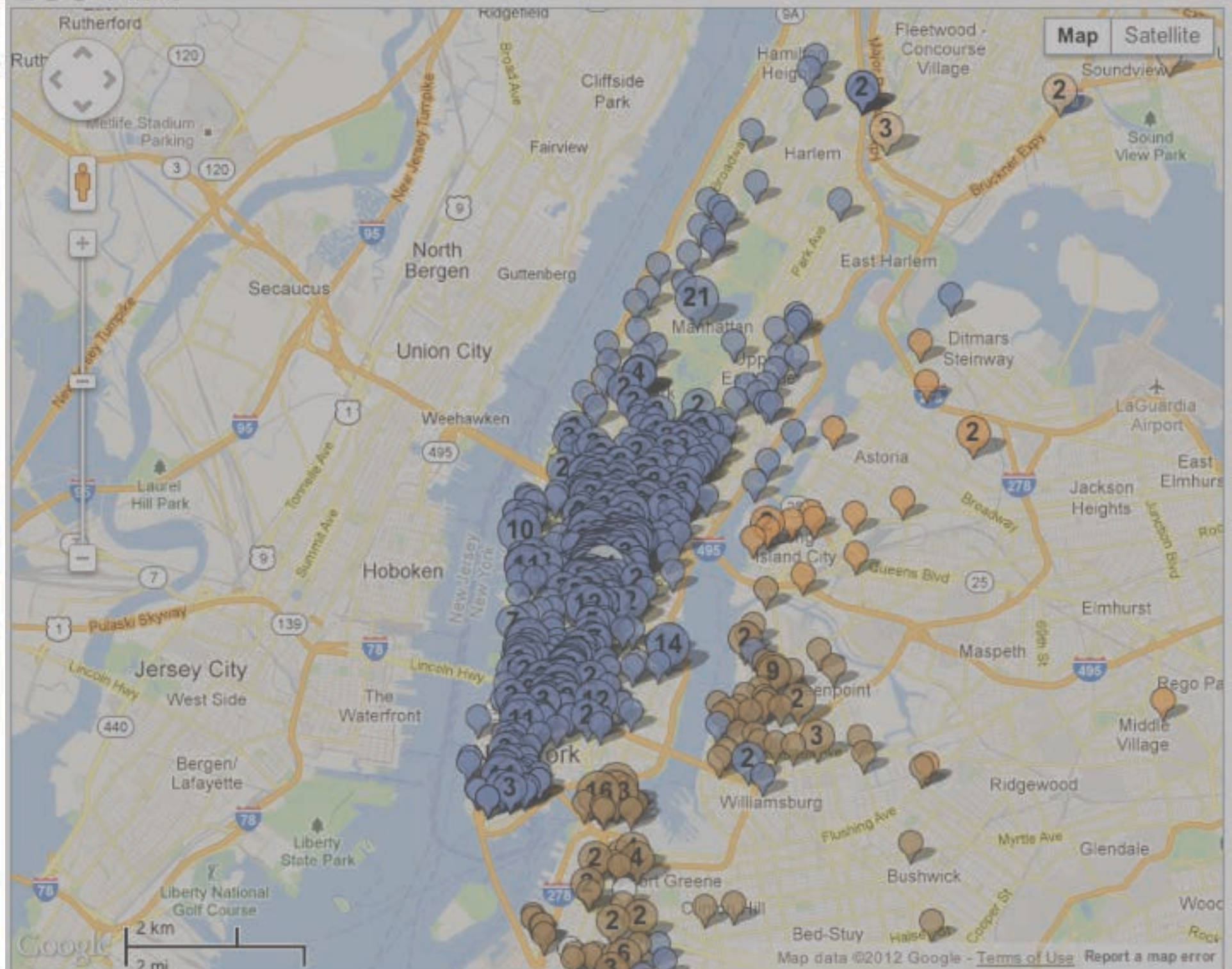
69 Coworking /  
Incubators

1669 HQ'd in NY

70 Investors

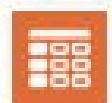
1804 Items

[MAP](#) • [TILE](#) • [LIST](#)



Bronx Brooklyn Manhattan Queens Staten Island mixed

# NYC OpenData

[Home](#)
[About NYC Open Data](#)
[FAQ](#)
[Contact NYC Open Data](#)


## Mapped In NY Companies

Raw data which powers the Mapped In NY site at ►



[Manage](#)
[More Views](#)
[Filter](#)
[Visualize](#)
[Export](#)
[Discuss](#)
[Embed](#)


	Company Name	Address	Address2
1	20x200	568 Broadway	11th Floor
2	Adafruit Industries	80 Nassau Street	Unit 4C
3	Adaptly	40 West 23rd Street	5th Floor
4	Admeld	230 Park Avenue South	Suite 1201
5	Allmenus	39 West 19th Street	7th Floor
6	Gust	158 West 29th Street	11th Floor
7	Animoto	440 Lafayette Street	2nd Floor
8	AOL	770 Broadway	
9	AppAddictive	122 West 26th Street	5th Floor
10	Appboy, Inc.	265 West 37th Street	Suite 1212
11	AppNexus	28 West 23rd Street	5th Floor
12	Art.sy	401 Broadway	25th Floor
13	Artsicle	247 Centre Street	6th Floor

### About This Dataset



**Andrew Nicklin**

created Jun 04, 2012

updated Sep 26, 2012

[View Full Page](#)

#### Description

Raw data which powers the Mapped In NY site at <http://www.mappedinny.com/>

#### Activity

Community Rating





[More Views](#)[Filter](#)[Visualize](#)[Export](#)**1**[Discuss](#)[Embed](#)[About](#)

Address2
11th Floor
Unit 4C
5th Floor
Suite 1201
7th Floor
11th Floor
2nd Floor
5th Floor
Suite 1212

## About This Dataset



**Andrew Nicklin**

*created Jun 04, 2012*

*updated Sep 26, 2012*

[View Full Page](#)



**Description**

Raw data which powers the Mapped In NY



## Hiring

855 NO  
960 YES

## Borough

11 Bronx  
205 Brooklyn  
1556 Manhattan  
23 Queens  
10 Staten Island

## Neighborhood

6 Astoria-Long Island City  
5 Battery Park  
1 Bay Ridge  
1 Bedford-Stuyvesant

## Category

69 Coworking / Incubators  
1665 HQ'd in NY  
70 Investors

MAP • TILE • LIST

1802 Items



## GeoNames

● Bronx ● Brooklyn ● Manhattan ● Queens ● Staten Island ● mixed

## CrunchBase Info

### Year Founded

1166

1 1933  
1 1963  
1 1968  
1 1972  
1 1976

### Category

1051

104 advertising  
6 cleantech  
17 consulting  
66 ecommerce  
7 education

### No:of Employees

1317

5 1  
25 10  
3 100

### Capital Raised

930

468 \$0  
1 \$1.02M  
1 \$1.08M



DEMO

What if you can mashup  
any NYC Open Data Set?





**“Smarter City” Platform**

Open Data  
is the Killer App  
of Linked Data



Linked Data  
is the Killer App  
of Open Data

**Big**

**Data**



OPEN

DATA

**Big**

**Data**

OPEN

DATA



DATA SCIENCE



# Big Data

# LINKED DATA



# DATA SCIENCE

江上白





# DATA WRANGLING





# DATA WRANGLING

*Big Boss*





# DATA WRANGLING

*Big Boss*



**DATA**





# DATA WRANGLING

*Data Wranglers*

*Big Boss*



**DATA**

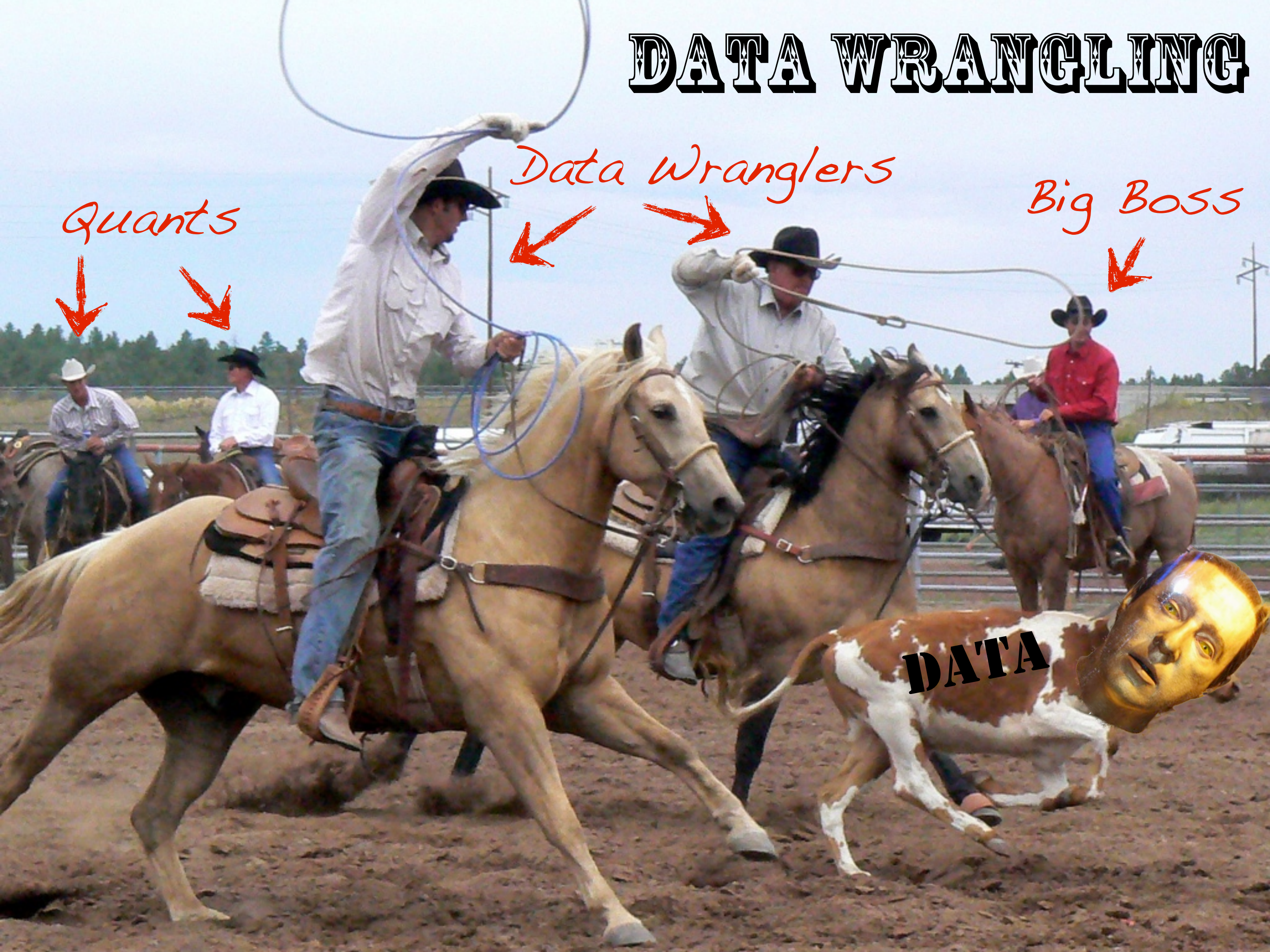


# DATA WRANGLING

*Data Wranglers*

*Big Boss*

*Quants*



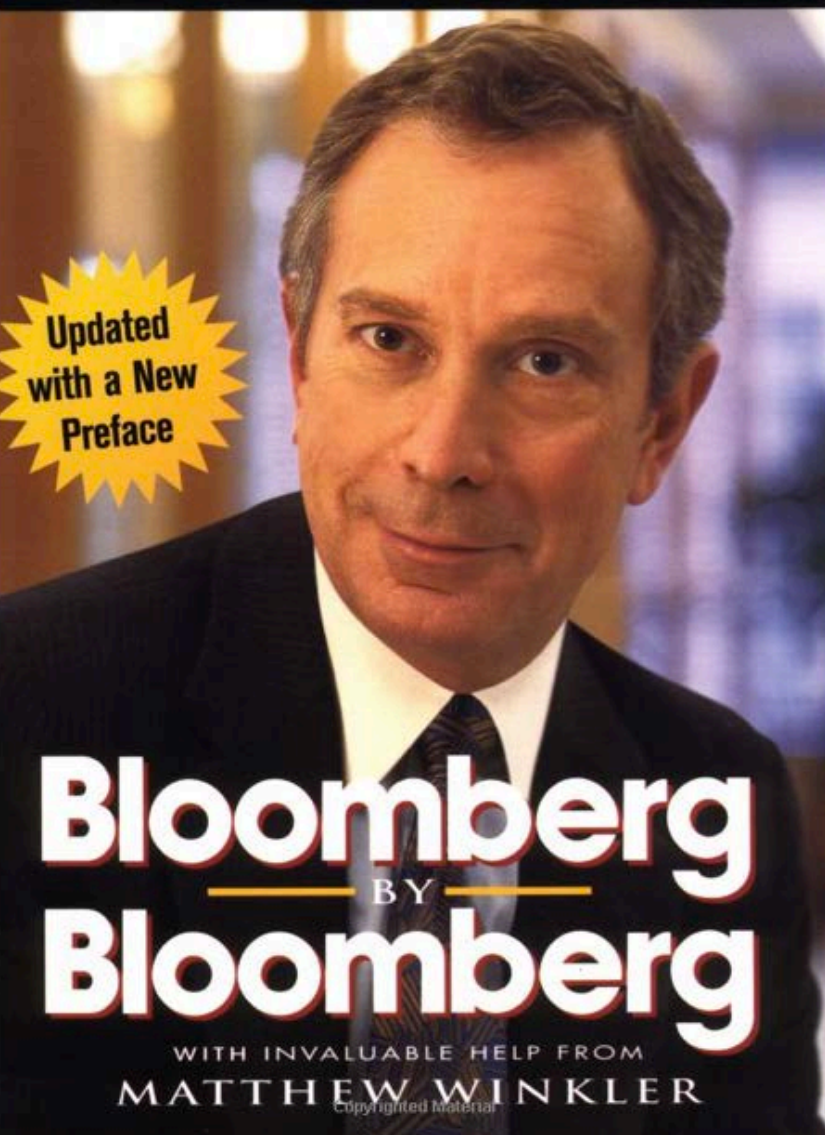
**DATA**





How can we minimize,  
if not eliminate  
Data Wrangling?

"Lots of entrepreneurs make money. Lots of entrepreneurs who make money write books. Few of those books make you glad they did. This one does." —The New York Times Book Review



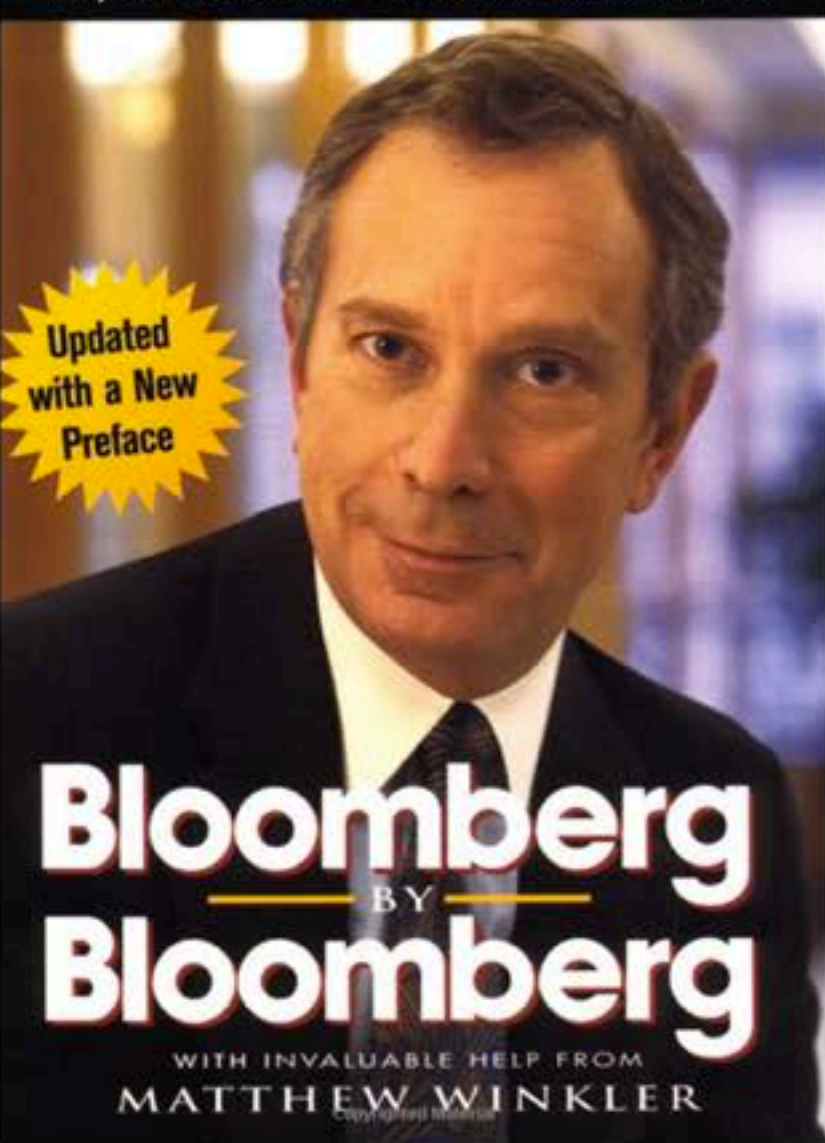
“At great expense, each of the largest securities **companies collected data independently**. Worse (for them but not for me), they were practically **relying on abacuses and slide rules**, or the modern equivalents, such as small handheld calculators, to manipulate that information. I could provide a far more **sophisticated system at a fraction of the price**.

”

*Michael R Bloomberg*



"Lots of entrepreneurs make money. Lots of entrepreneurs who make money write books. Few of those books make you glad they did. This one does." —The New York Times Book Review



# DATA WRANGLING

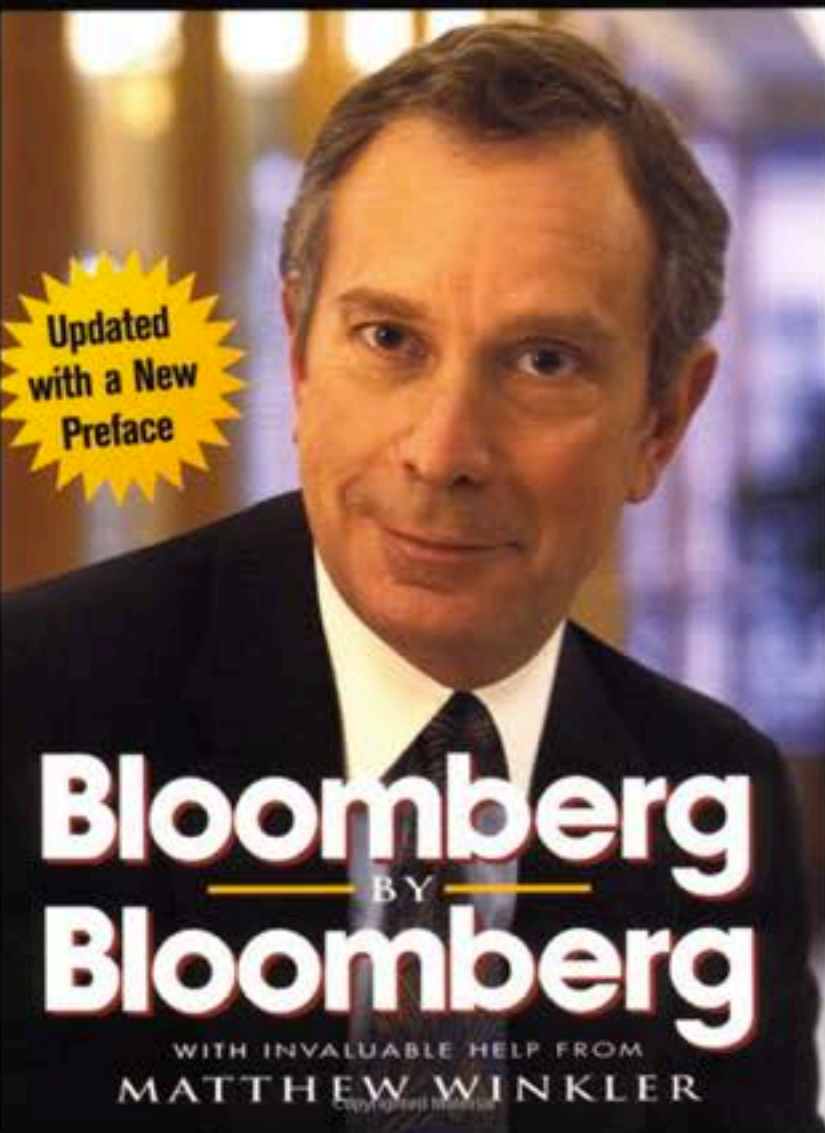
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PITCH

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# DATA WRANGLING

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PITCH

”

*Ontodia will do exactly this for Big Linked Open Data.*

*Michael R Bloomberg*



Answers from  
Raw Data

Human-  
Usable

Developer  
Accessible

6-Star  
Data



# Answers from Raw Data



Answers from  
Raw Data

Human-  
Usable

Developer  
Accessible

6-Star  
Data

**Human-  
Usable**



# Human-Usable

## About: [Times Square](#)

An Entity of Type : [\\_Feature](#), from Named Graph : <http://dbpedia.org>, within Data Space : [dbpedia.org](#)



Times Square is a major commercial intersection in Midtown Manhattan, New York City, United States, at the junction of Broadway and Seventh Avenue and stretching from West 42nd to West 47th Streets. Times Square, iconified as "The Crossroads of the World" and the "The Great White Way", is the brightly illuminated hub of the Broadway theater district, one of the world's busiest pedestrian intersections, and a major center of the world's entertainment industry.

Property	Value
<a href="#">dbpedia-owl:abstract</a>	<div><ul style="list-style-type: none"><li>Times Square és la plaça per excel·lència de la ciutat de Nova York, situada en el centre de Manhattan, entre les avingudes sisena i novena, i els carrers 39 a 52 . El seu centre és l'encreuament del carrer 42 i l'avinguda Broadway, on es forma una plaça originalment coneguda com plaça Longacre. La plaça va ser reanomenada com a Times Square el 1904, perquè l'oficina central del diari The New York Times estava localitzada en el cantó esmentat. Per a celebrar el canvi de nom, el diari va organitzar una celebració pública per a rebre l'any nou. Quan el diari es va canviar de direcció al carrer 46 el 1913, el nom Times Square ja era reconegut, fins i tot l'estació de metro de la zona va ser denominada amb aquest nom. La festa d'any nou va continuar realitzant-se fora de l'edifici original del diari, arribant a ser una de les festes preses com referència per a documentar la nit de cap d'any anualment. Es caracteritza per les seves desenes d'anuncis lluminosos publicitaris. Anunciar-se a Times Square és molt car; l'anunci més barat és del de Coca-cola, que paga un milió de dòlars a l'any, a causa d'un antic contracte. La raó per la qual anunciar-se a Times Square és tan car és que s'estima que la plaça té 26 milions de visitants a l'any. Times Square és, juntament amb el parc central de Nova York, la zona metropolitana d'Estat Unit d'Amèrica que més ha aparegut en pel·lícules i programes de televisió.</li><li>Times Square je křižovatka mezi Broadwayí a Sedmou Avenue na Manhattanu v New Yorku. Pobočky zde má mnoho firem např. Reuters, Viacom, MTV nebo New York Times. Je známou dominantou New Yorku. Oblast Times Square je tvořena bloky mezi šestou a osmou avenue od východu na západ a západní 40. ulicí a západní 53. ulicí od severu k jihu, tvoří západní část komerčních prostor Midtown Manhattanu. Dříve se jmenovalo Longacre Square, na Times square bylo přejmenováno podle Times Building v dubnu 1904. Times Square, někdy známé jako "Crossroads of the World," ("křižovatka světa") dosáhlo status světové kulturní památky a stalo se symbolem New Yorku. Na jiho-východním rohu náměstí Times Square je začátek Lincolnovy dálnice, první silnice napříč Spojenými státy americkými.</li><li>Der Times Square in New York City liegt an der Kreuzung Broadway und Seventh Avenue und ist nach dem von der Zeitung New York Times</li></ul></div>



- Ende erhielt den Namen; im nördliche Ende wurde in Duffy Square umbenannt.
- Times Square is a major commercial intersection in Midtown Manhattan, New York City, United States, at the junction of Broadway and Seventh Avenue and stretching from West 42nd to West 47th Streets. Times Square, iconified as "The Crossroads of the World" and the "The Great White Way", is the brightly illuminated hub of the Broadway theater district, one of the world's busiest pedestrian intersections, and a major center of the world's entertainment industry.
- Times Square es una intersección de Manhattan. Está situada en la esquina de la Avenida Broadway y la Séptima Avenida. La zona de Times Square esta formada por las manzanas situadas entre las Sexta Avenida y Octava avenidas que constituyen la parte occidental de la zona comercial del centro de Manhattan.
- Times Square on alue, joka sijaitsee New Yorkissa Manhattanilla. Kyseessä ei ole varsinainen tori, vaan Broadwayn ja 42nd Streetin risteyksen ympärillä sijaitseva alue. Times Square rajoittuu itä-länsisuunnassa 8th ja 9th Avenuihin ja pohjois-eteläsuunnassa 39th ja 52nd Streetin väliselle alueelle. Times Square muodostaa Manhattanin keskikaupungin kaupallisen alueen läntisen osan. Times Square on nimetty alueella 1900-luvun alussa sijainneen New York Timesin pääkonttorin mukaan.
- Times Square, nommé d'après l'ancien emplacement du siège du New York Times, est un quartier de la ville de New York, situé dans le borough de Manhattan. Centré sur la 42 rue et Broadway, il comprend les blocs situés entre la Sixième et la Neuvième Avenue d'est en ouest, et entre les 39 à 52 rue du sud au nord. Il constitue la partie ouest du quartier commerçant de Midtown.
- Times Square è uno dei maggiori incroci del distretto newyorkese di Manhattan, all'intersezione tra Broadway e la Seventh Avenue e si estende dalla West 42nd Street alla West 47th Street. Times Square è formata dagli isolati compresi tra la Sixth Avenue e la Eighth Avenue e tra la West 40th Street e la West 53rd Street formando la parte più a ovest dell'area commerciale di Midtown Manhattan.
- タイムズ・スクウェア (Times Square) は、アメリカ合衆国のニューヨーク市内ミッドタウンにある繁華街・交差点の名称。マンハッタン島の42丁目と7番街、ブロードウェイの交差を中心に位置し、東西は6番街から9番街まで、南北は39丁目あたりから52丁目あたりに広がるが、厳密な境界はない。いわゆるブロードウェイ・ミュージカルが上演されている各シアターが存在するシアター・ディストリクトの中心とほぼ一致する。タイムズスクウェアには建物外壁へのビルボードの設置が多く、世界中の企業の広告や巨大ディスプレイ、ネオンサインや電工看板が多くあり、アメリカのみならず世界の繁華街の代表的風景ともいえる。UKポップ・グループ、スパイス・ガールズの大ヒット曲「2Become1」のプロモーション・ビデオの撮影地としても有名。世界中からの観光客が集まる場所でもあり、この交差点は世界の交差点と言われる。
- 타임스 스퀘어(Times Square)는 미국 뉴욕 맨해튼 섬의 중앙부를 비스듬히 뚫는 브로드웨이 42번가(街)와 만나는 일대를 말한다. 음식점·영화관·극장·상점이 집중하는, 뉴욕에서 제일가는 한라가로서 특히 밤에 붐빈다. 그 중심의 광장엔 신날 그림날 밤 신년을 축하하려는 군중이 압주의 여지 없이 모여든다. 2011년에는 대한민국 기업인 카페테나가 이곳에 위치할 예정이다.
- Times Square is zowel een plein als een buurt in Manhattan, New York in de buurt van 42nd Street en Broadway. De naam is afgeleid van het voormalige hoofdkantoor van de krant The New York Times. Tot de bouw daarvan in 1904 heette het Longacre Square. Het plein ligt op de kruising van Broadway en Seventh Avenue tussen West 42nd Street tot West 47th Street. Onder het plein ligt het metrostation Times Square-42nd Street. Het plein is het culturele centrum van New York City.
- Times Square er et lite område av Manhattan i New York. Området er avgrenset av 6. og 9. aveny fra øst mot vest, og av 39. og 52. gate fra sør mot nord. Sentrum i dette området dannes der Broadway krysser 42. til 45. gate, og er et hektisk kulturelt og kommersielt knutepunkt. Mange av New Yorks mest berømte teatre ligger her, i tillegg til TV-stasjoner, banker, opplevelsessentre og andre mediaselskaper som Reuters og Viacom.
- Times Square (plac Times) – plac na Manhattanie w Nowym Jorku znajdujący się na skrzyżowaniu Broadwayu i alei Siódmej, rozciągający się od ulicy 42 do ulicy 47. Pełni podobną funkcję jak Plac Czerwony w Moskwie, Pola Elizejskie w Paryżu czy plac Trafalgar w Londynie. Jest on jedną z ikon Nowego Jorku oraz centrum światowego handlu oraz mody; słynie z dużej ilości światel.
- Times Square é a denominação da área formada na confluência e cruzamento de duas grandes avenidas da cidade de Nova Iorque, Estados Unidos; podendo ser definida como uma grande praça ou largo, composta por vários cruzamentos e esquinas. A área está localizada na junção da Broadway com a 7ª Avenida, entre a ruas 42 Oeste e 47 Oeste, na região central de Manhattan. É uma área comercial, onde todos os prédios são obrigados a instalar letreiros luminosos para propósitos de publicidade.
- Таймс-Сквер — площадь в центральной части Манхэттена в городе Нью-Йорке в США, расположенная на пересечении Бродвея и Седьмой авено в промежутке между 42-й и 47-й улицами. Одно из наиболее популярных и часто посещаемых мест в Нью-Йорке. Площадь получила своё название от ранее находившегося здесь главного офиса газеты Нью-Йорк Таймс (англ. The New York Times).
- Times Square i New York består av kvarteren mellan 6:e och 9:e avenyn och mellan 39:e och 52:a gatan, med centrum kring 42:a gatan och Broadway. Det har fått sitt namn av att New York Times hade sitt huvudkontor här tidigare. Times Square är en av världens folktätaste platser och likaså populäraste. Varje nyår firas här med fyrverkerier och hundratusentals människor runt omkring.
- Таймс-сквер, майдан у США в місті Нью-Йорк в окрузі Мангеттен. З 1907 р. Таймс-сквер є традиційним місцем масової зустрічі Нового року. Щороку близько північ 31-го грудні понад 750 000 людей збираються на Таймс-сквер, щоб побачити традиційне спускання кристалевого м'яча, що має символізувати прихід Нового року. Таймс-сквер розташований на острові Мангеттен на перехресті Бродвею і Сьомої Авеню.
- Quảng trường Thời đại (Times Square) là một giao lộ chính ở Manhattan, nối Đại lộ Broadway và Đại lộ Số bảy, kéo dài từ Đường thứ 42 Tây đến Đường thứ 47 Tây. Quảng trường Thời đại gồm những khối nhà nằm giữa Đại lộ Số sáu và Đại lộ Số chín, từ đông sang tây; giữa Đường thứ 39 Tây và Đường thứ 52 Tây, từ nam ra bắc; tạo thành phần phía tây của vùng thương mại Midtown Manhattan.
- 時報廣場（Times Square）是美國紐約市曼哈頓的一塊街區，中心位於西42街與百老匯大道交會處，範圍東西向分別至第六大道與第九大道，南北向分別至西39街與西52街，構成曼哈頓中城商業區的西部。時報廣場的名稱源自《紐約時報》（New York Times）早期在此設立的總部大樓，由於New York Times又常被譯為「紐約時代報」，因此也有「時代廣場」的譯名方式存在。

rd/s:label

- Times Square
- Times Square
- Times Square
- Times Square
- Times Square
- Times Square
- Times Square
- タイムズスクウェア (ニューヨーク州)
- 타임스 스퀘어
- Times Square
- Times Square
- Times Square
- Times Square
- Таймс-сквер
- Times Square
- Таймс-Сквер
- Quảng trường Thời đại
- 時報廣場

owl:sameAs

- http://es.dbpedia.org/resource/Times\_Square
- http://cs.dbpedia.org/resource/Times\_Square
- http://ja.dbpedia.org/resource/タイムズスクウェア\_(ニューヨーク州)
- http://pl.dbpedia.org/resource/Times\_Square
- http://ru.dbpedia.org/resource/Таймс-сквер
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- http://fr.dbpedia.org/resource/Times\_Square
- http://ko.dbpedia.org/resource/타임스\_스퀘어
- http://sws.geonames.org/5141023/
- http://sw.cyc.com/concept/Mx4rvccQspwpEbGdrcN5Y29ycA



Answers from  
Raw Data

Human-  
Usable

Developer  
Accessible

6-Star  
Data



# Developer Accessible





Answers from  
Raw Data

Human-  
Usable

Developer  
Accessible

6-Star  
Data

# 6-Star Data





Under the star scheme, you get one (big!) star if the information has been made public at all, even if it is a photo of a scan of a fax of a table -- if it has an open licence. The you get more stars as you make it progressively more powerful, easier for people to use.

★ Available on the web (whatever format) *but with an open licence, to be Open Data*

★★ Available as machine-readable structured data (e.g. excel instead of image scan of a table)

★★★ as (2) plus non-proprietary format (e.g. CSV instead of excel)

★★★★ All the above plus, Use open standards from W3C (RDF and SPARQL) to identify things, so that people can point at your stuff

★★★★★ All the above, plus: Link your data to other people's data to provide context

How well does your data do? You can buy [5 star data mugs](#), T-shirts and bumper stickers from the W3C shop at cafepress: use them to get your colleagues and fellows conference-goers thinking 5 star linked data. (Profits also help W3C :-).

Now in 2010, people have been pressing me, for government data, to add a new requirement, and that is there should be metadata about the data itself, and that that metadata should be availble from a major catalog. Any open dataset (or even datasets which are not but should be open) can be regisetreed at ckan.net. Government datasets from the UK and US hshould be regisetred at data.gov.uk or data.gov respectively. Other copuntries I expect to develop their own registries. Yes, there should be metadata about your dataset. That may be the subject of a new note in this series.

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Answers from  
Raw Data

Human-  
Usable

Developer  
Accessible

6-Star  
Data

# Linked Answers, not Raw Data...

Show me all [Restaurant Week participants](#) downtown, with a [restaurant inspection grade](#) of B and above, its [Yelp rating](#), [nearby street fairs](#), if its a [green neighborhood](#), filtering on [political leanings](#), and a [parking garage](#) within 500 feet.

**RESIDENT**

**BUSINESS/  
INVESTORS**

Show me a list of all properties with a tax lien in a given neighborhood, whose lien is less than 50% of that properties' fair market value.

Show me the Turnaround Time for 311 complaints for a given neighborhood categorized by complaint class, cross-referenced with Quality of Life indicators.

**GOVT**

**TOURIST**

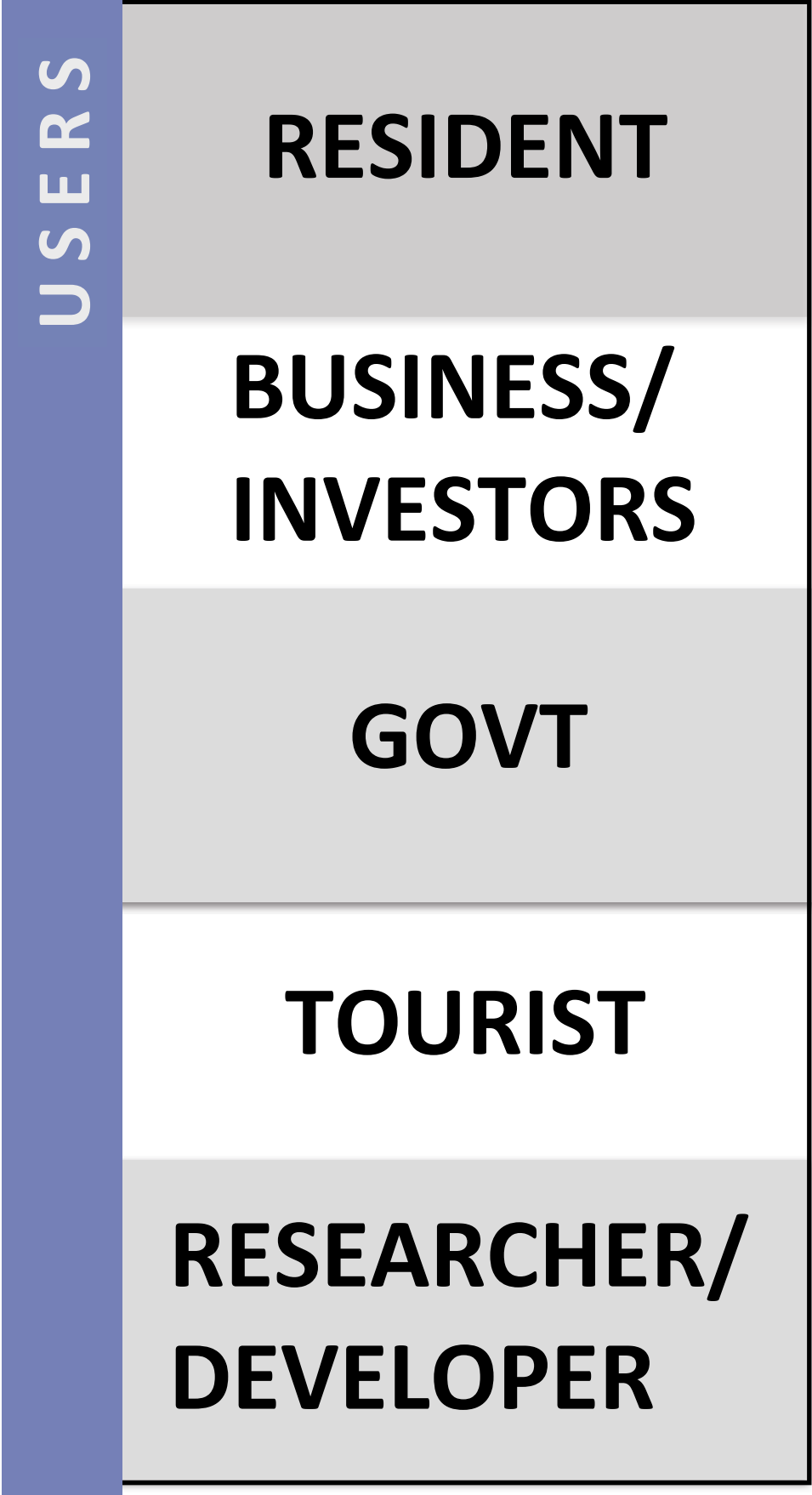
Show me a list of all discount Broadway shows that are marked down by at least 40% in the next two days. Show primary and secondary marketplaces.

Give me all these queries. JSON format, once a day at 1am EST. Give me Delta files as well as new data. I want historical data as well to support time series analysis.

**RESEARCHER/  
DEVELOPER**

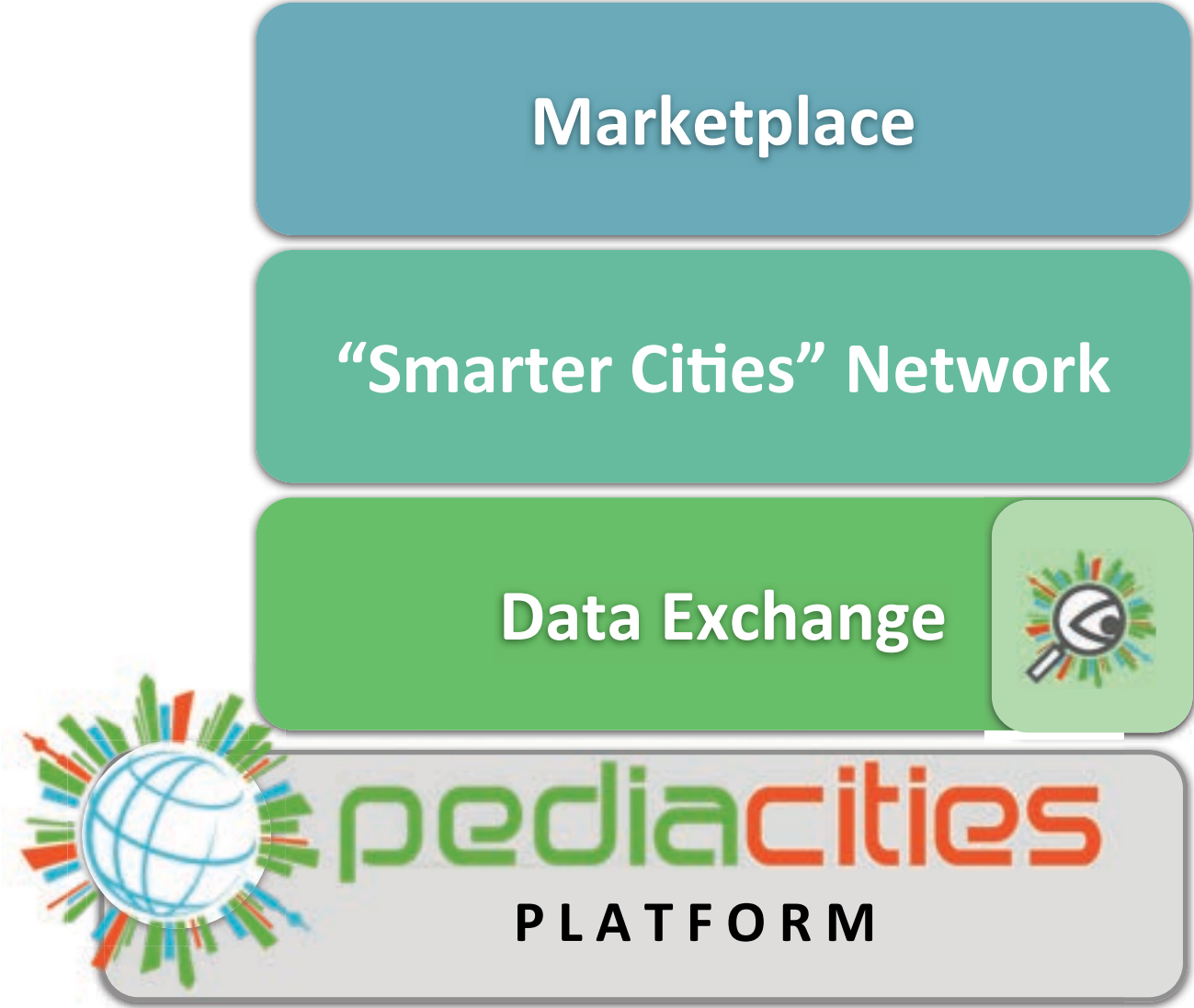
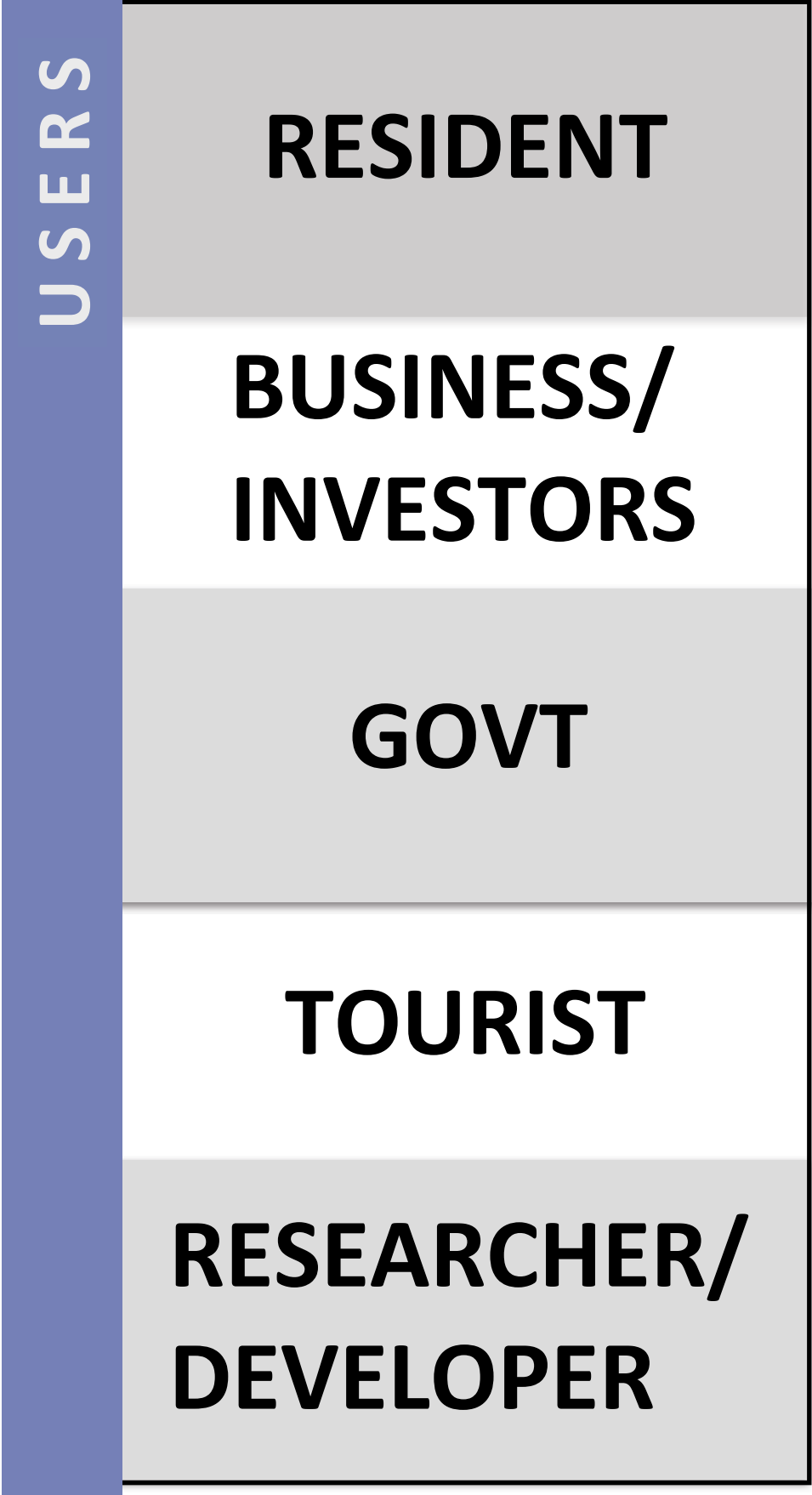


# Linked City Answers, not Raw Data...



**SOLUTION**

# Linked City Answers, not Raw Data...



**SOLUTION**



# Linked City Answers, not Raw Data...

USERS

Marketplace

“Smarter Cities” Network

Data Exchange

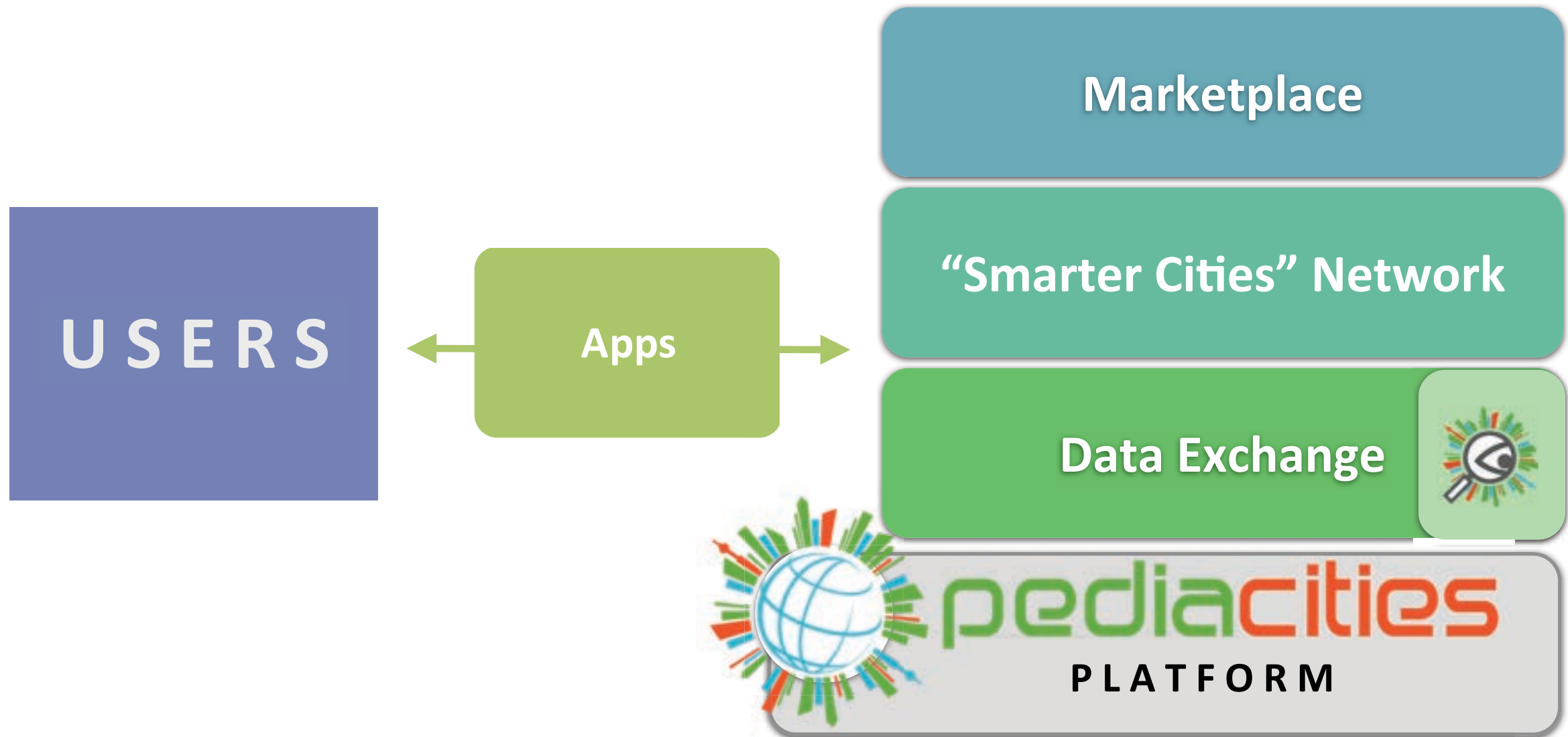


pediacities

PLATFORM

SOLUTIONS

# Linked City Answers, not Raw Data...







App Layer

Data/App  
Layer

App Layer

=

Mobile Apps  
Desktop Apps  
Website  
Analytics  
Feed

Data/App  
Layer



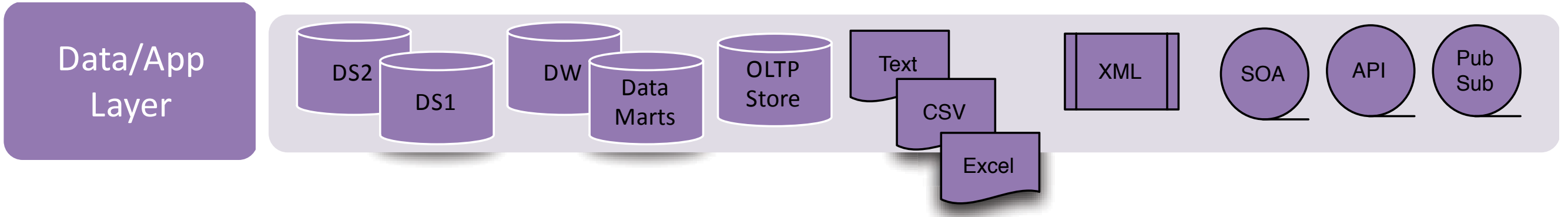
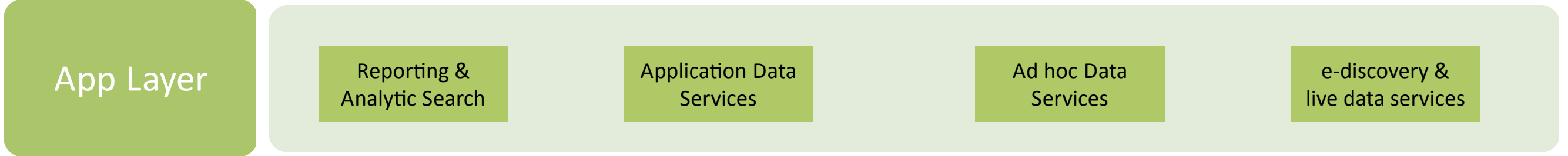


Mobile Apps  
Desktop Apps  
=  
Website  
Analytics  
Feed

=

Apps are a  
specialized  
perspective/  
bundling of Data







App Layer

Reporting &  
Analytic Search

Application Data  
Services

Ad hoc Data  
Services

e-discovery &  
live data services

Data/App  
Layer

DS2

DS1

DW

Data  
Marts

OLTP  
Store

Text

CSV

Excel

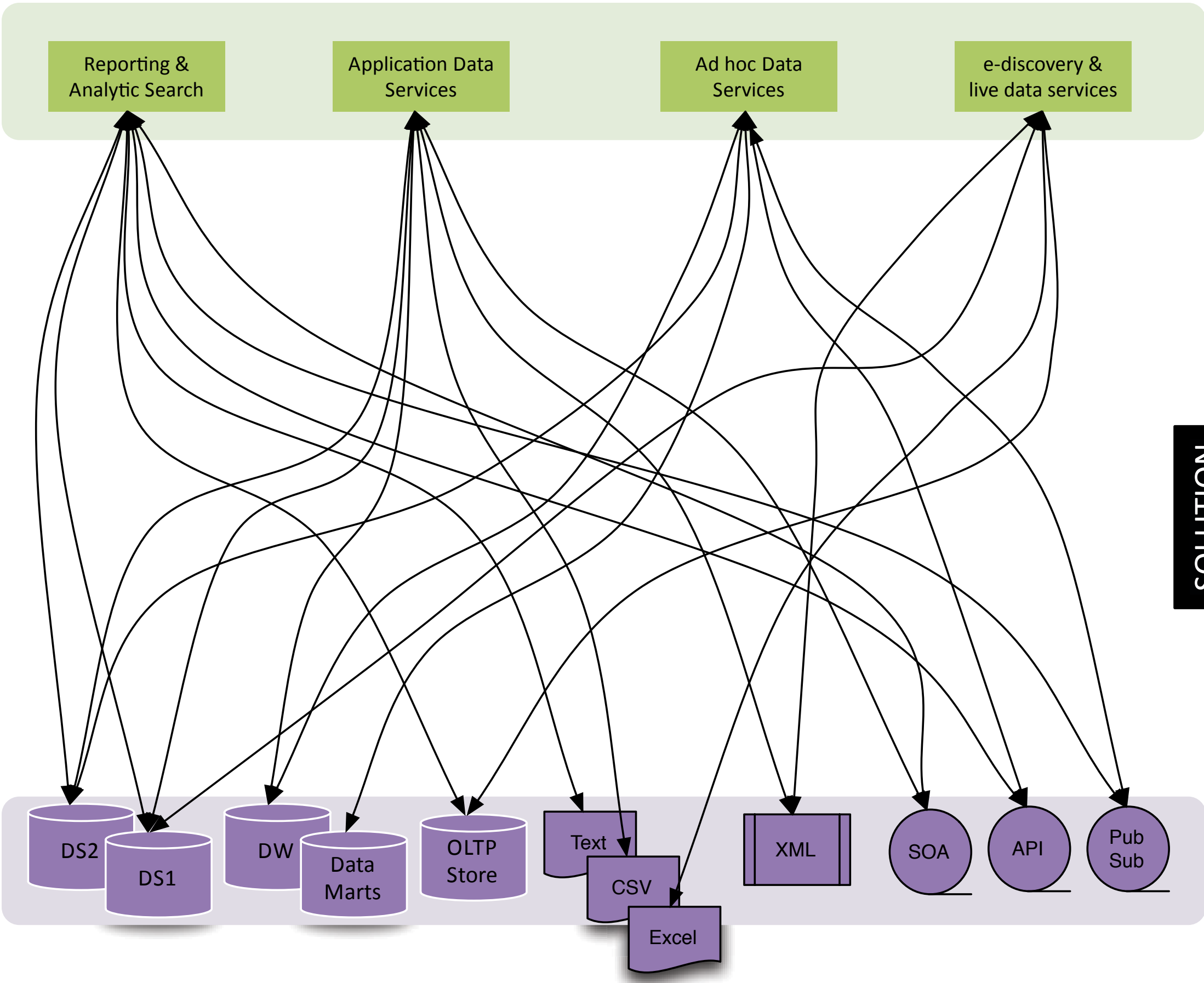
XML

SOA

API

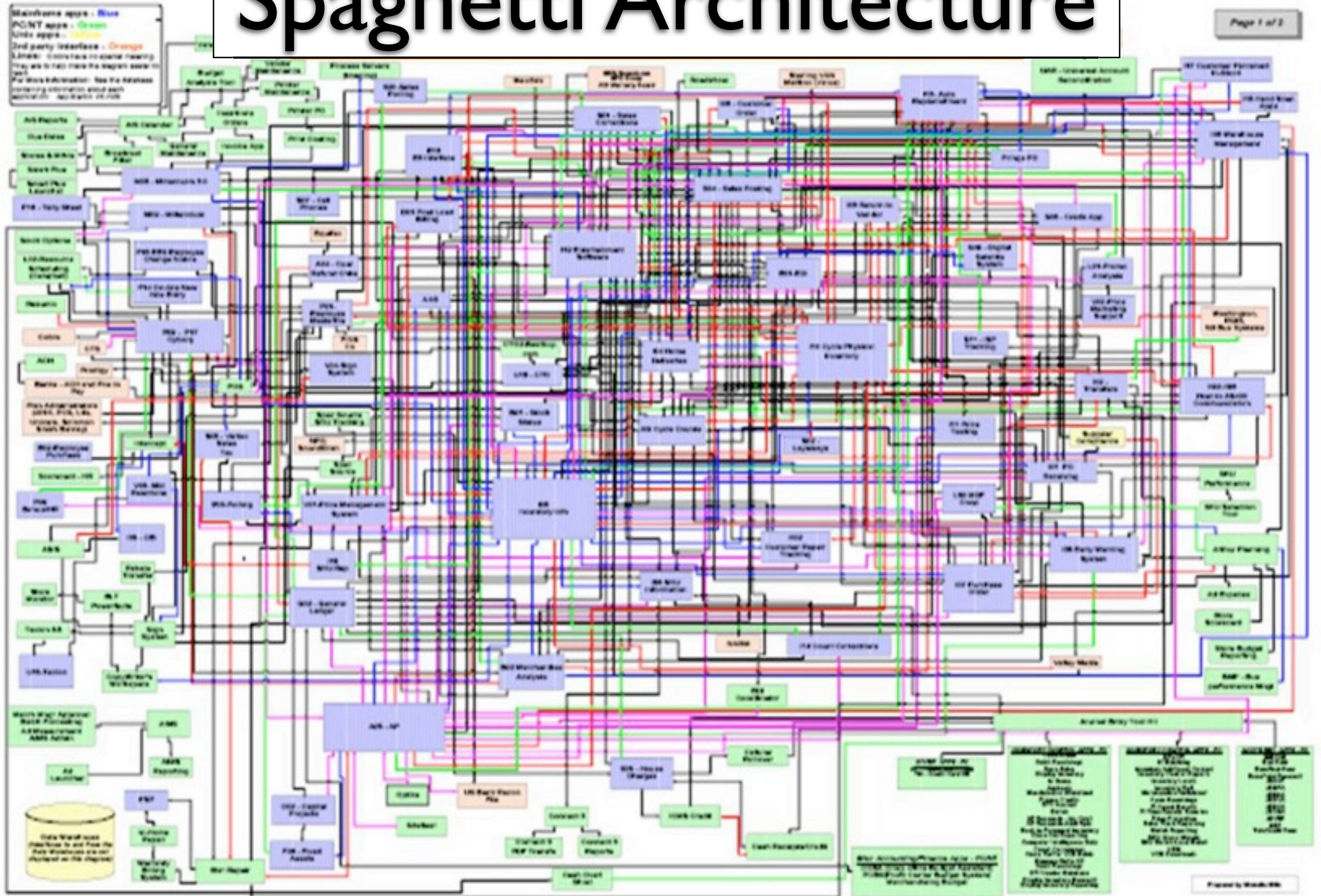
Pub  
Sub

SOLUTION





## Page 1 of 1





App Layer

Reporting &  
Analytic Search

Application Data  
Services

Ad hoc Data  
Services

e-discovery &  
live data services

Data/App  
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DS2

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Text

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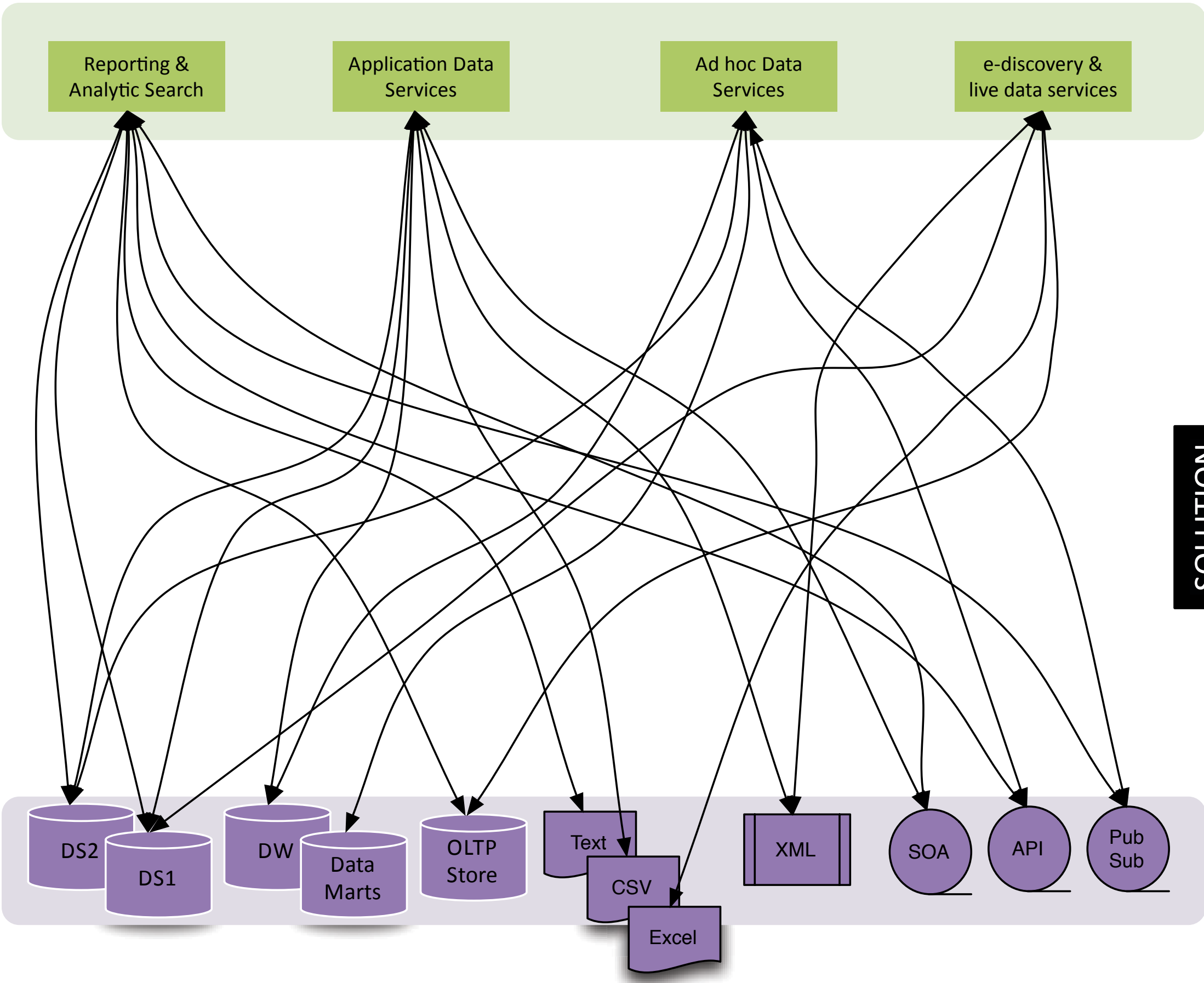
XML

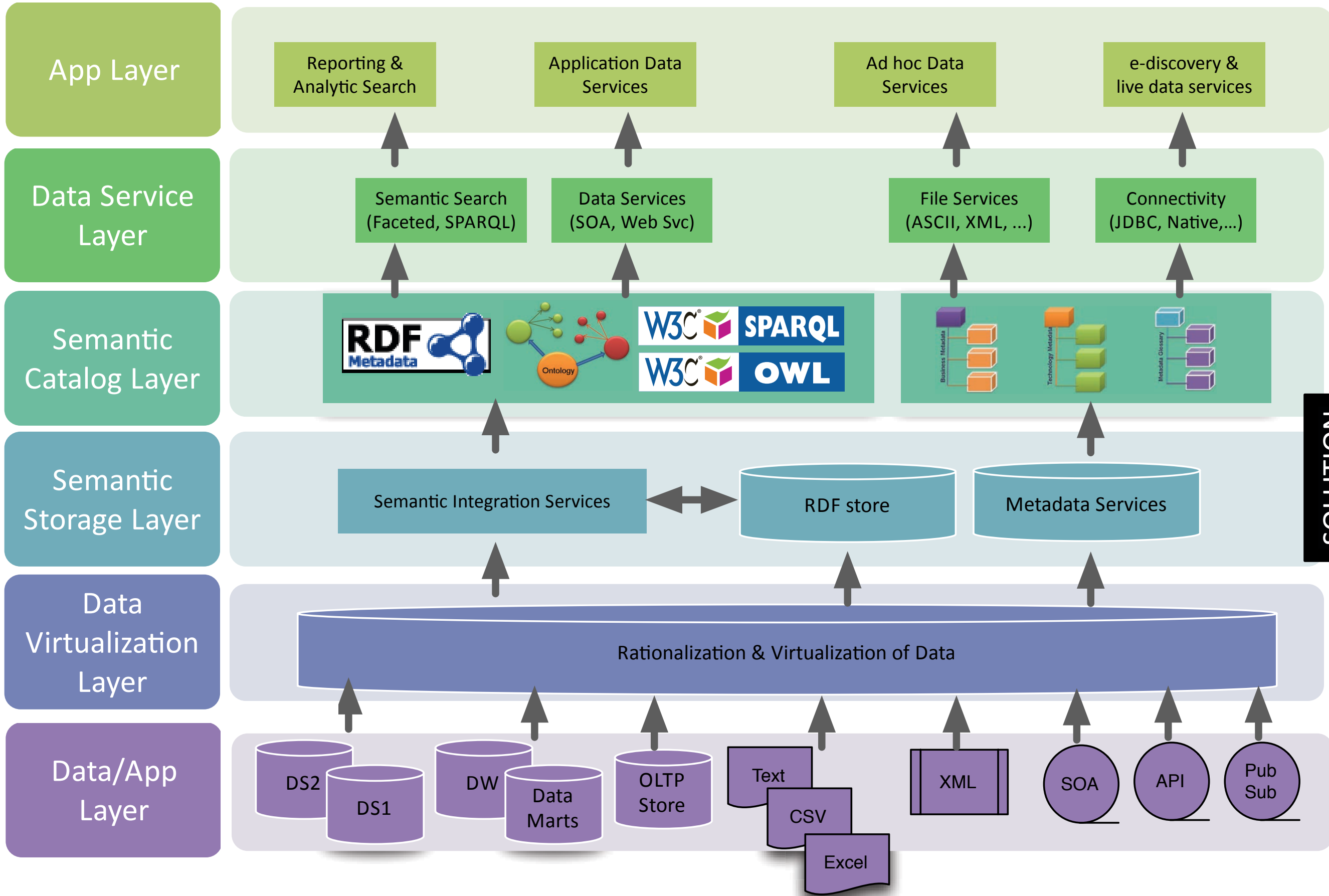
SOA

API

Pub  
Sub

SOLUTION





SOLUTION



App Layer

Reporting &  
Analytic Search

Application Data  
Services

Ad hoc Data  
Services

e-discovery &  
live data services



pediacities

Question  
Interface  
(API, form,  
SPARQL,  
Plain  
English)

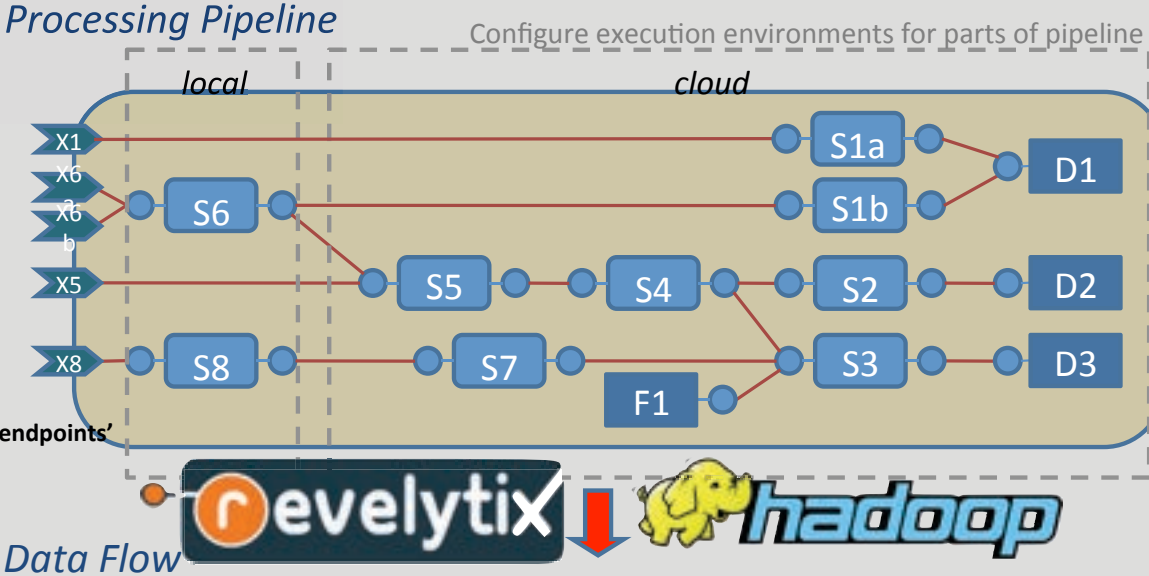
Data Service  
Layer

Semantic  
Catalog Layer

Semantic  
Storage Layer



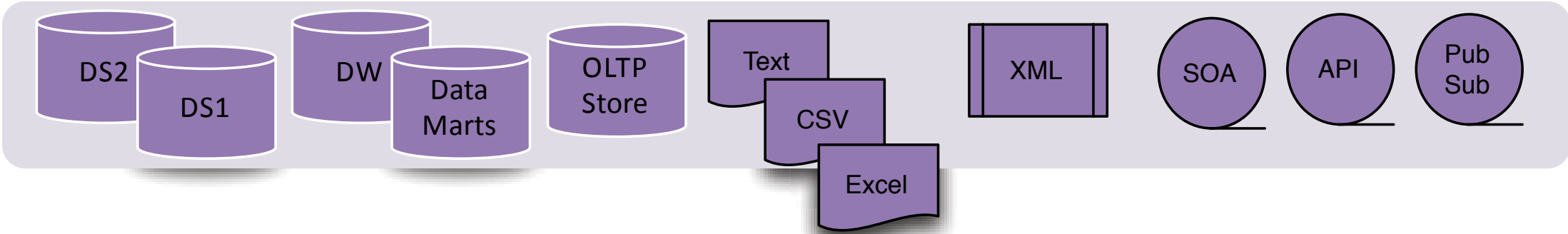
Data  
Virtualization  
Layer



LINKED  
ANSWERS

SOLUTION

Data/App  
Layer



App Layer

Reporting &  
Analytic Search

Application Data  
Services

Ad hoc Data  
Services

e-discovery &  
live data services



SOLUTION

Data/App  
Layer

DS2

DS1

DW

Data  
Marts

OLTP  
Store

Text

CSV

Excel

XML

SOA

API

Pub  
Sub



DEMO

LEGEND:

UPGRADING

BUILT

BUILDING

App Layer

Reporting &  
Analytic Search

Application Data  
Services

Ad hoc Data  
Services

e-discovery &  
live data services

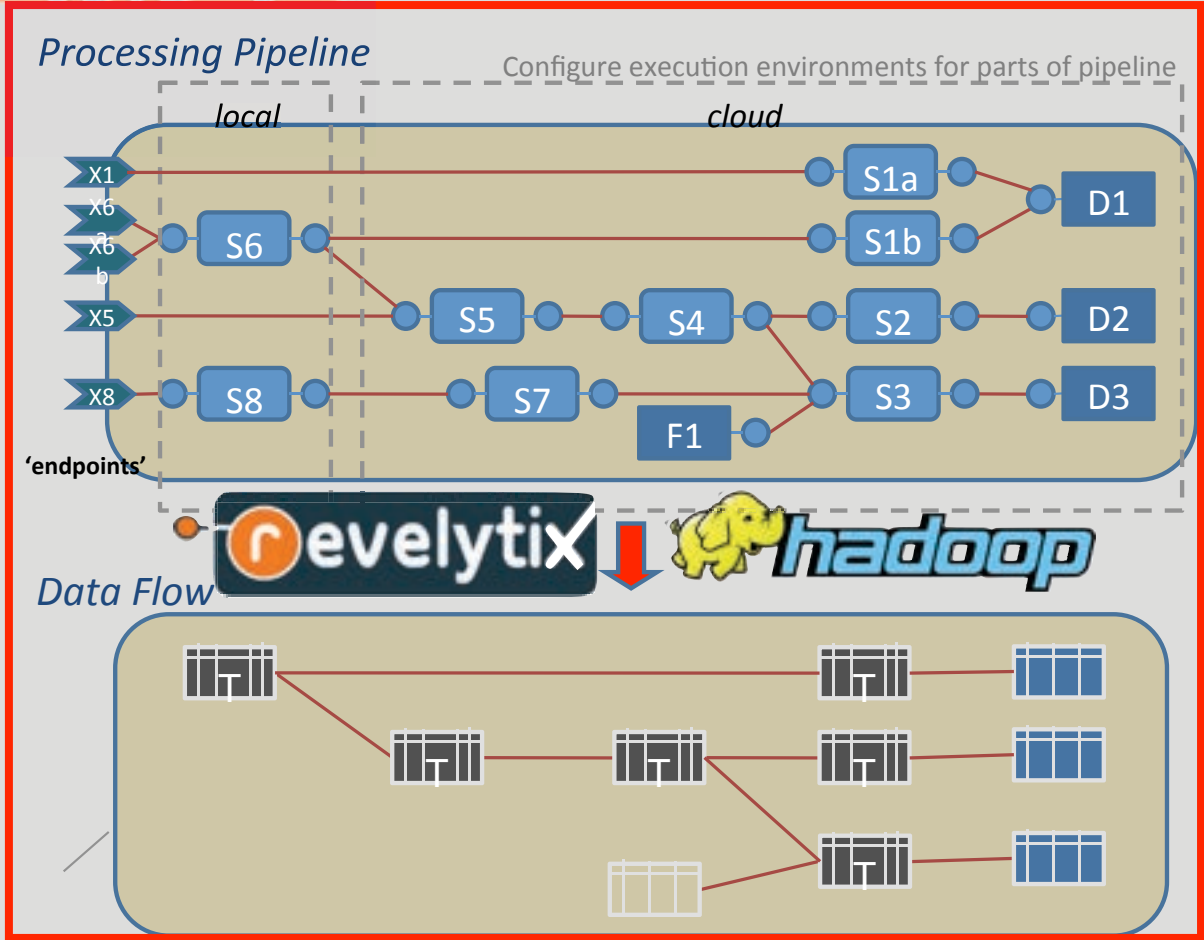


pediactivities

Question  
Interface  
(API, form,  
SPARQL,  
Plain  
English)



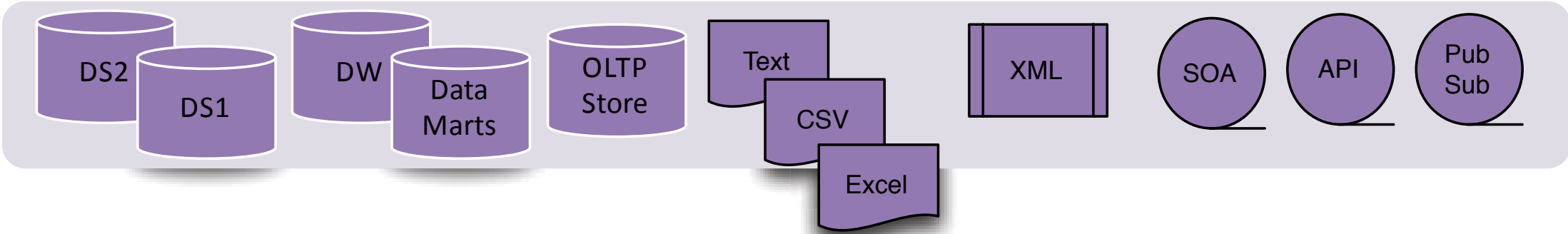
- Data Service Layer
- Semantic Catalog Layer
- Semantic Storage Layer
- Data Virtualization Layer



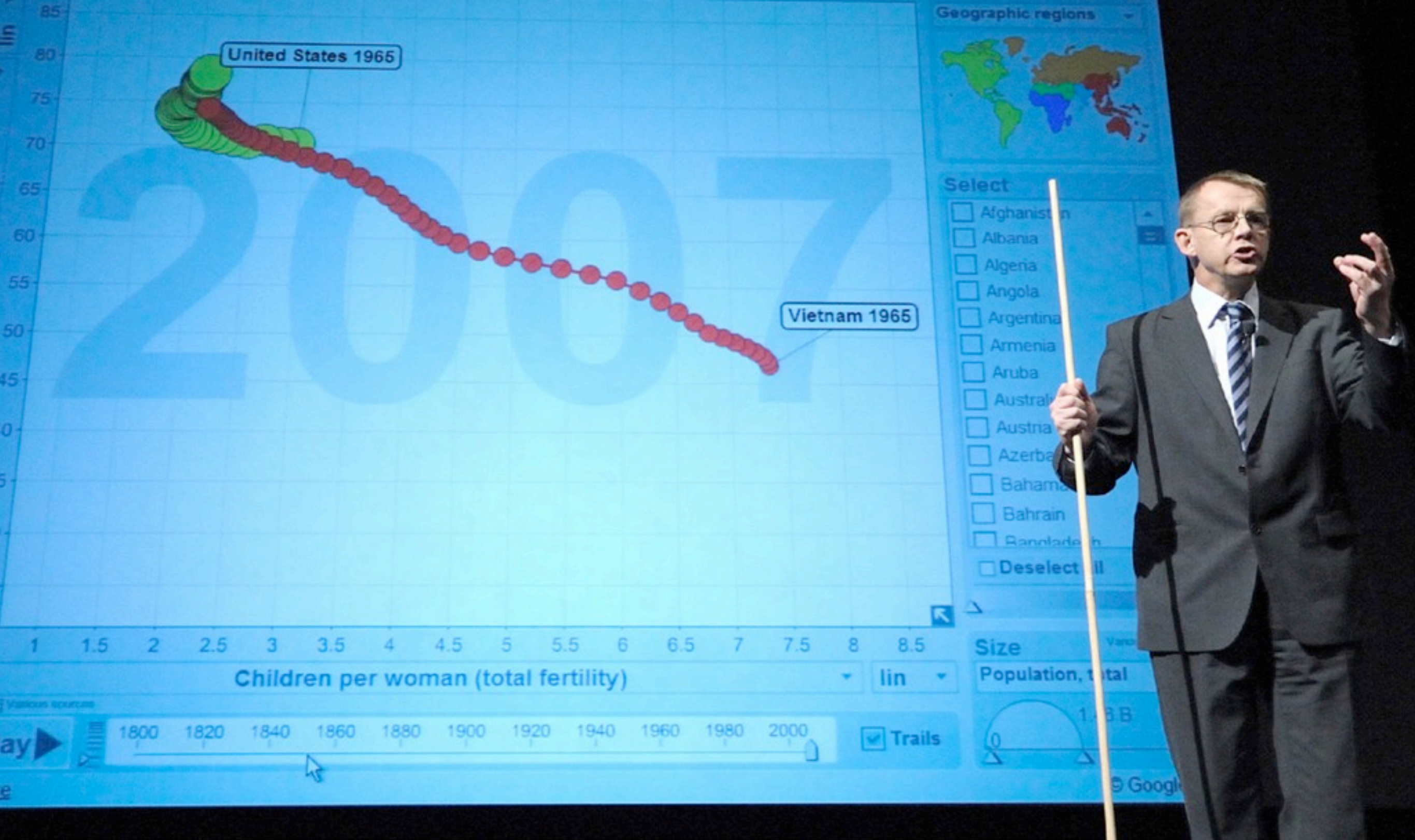
LINKED  
ANSWERS

SOLUTION

Data/App  
Layer



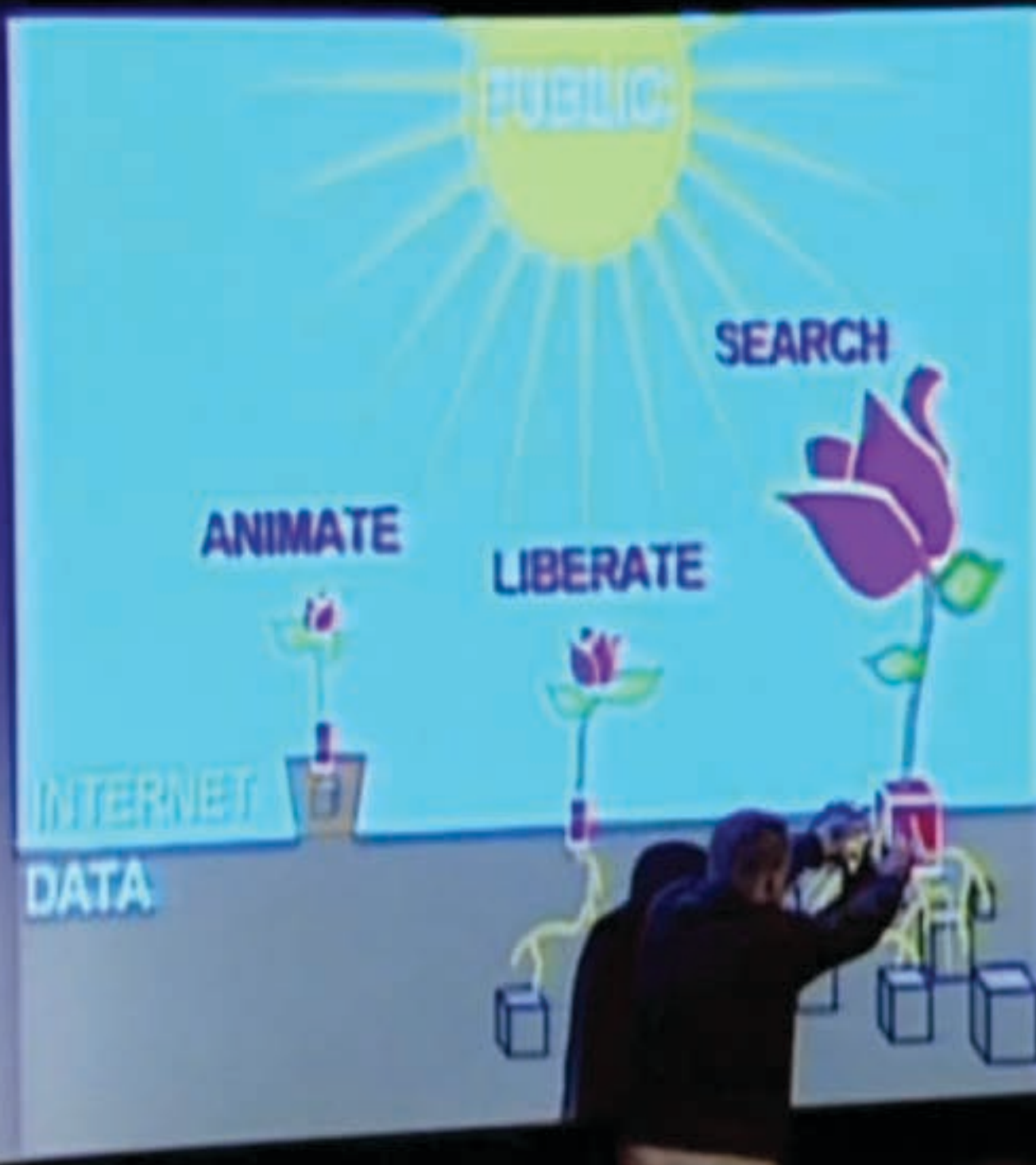




**TED**

Hans Rosling  
Shows the best stats you've ever seen  
February 2006









... that “*Search Function*”  
and something for the everyday user



# pediacities

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PUBLIC



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Tech

Media

Bioscience

Fashion

Edutech

Industrial

Financial Services



Residents

Tourists

Visitors

Governments

NGOs

Researchers

# RIVER OF DATA

DATA IS THE LIFEBLOOD OF THE  
POST-INDUSTRIAL AGE

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Invitation-only access to NYC BigApps 2012 entrants  
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- Tim Berners-Lee highlight from TED ([http://www.ted.com/talks/tim\\_berners\\_lee\\_on\\_the\\_next\\_web.html](http://www.ted.com/talks/tim_berners_lee_on_the_next_web.html))
- “Team Roping Williams” taken from [virginvagabonds.com](http://virginvagabonds.com)
- Hans Rosling highlight from TED ([http://www.ted.com/talks/hans\\_rosling\\_shows\\_the\\_best\\_stats\\_you\\_ve\\_ever\\_seen.html](http://www.ted.com/talks/hans_rosling_shows_the_best_stats_you_ve_ever_seen.html))
- “Garden of Data” imagery taken from presentations provided by Hans Rosling & Anna Rosling Rönnlund of gapminder
- several images taken from NYC.gov & NYCEDC properties
- DataGotham logo provided by Hilary Mason
- Various screenshots provided by Revelytix, Spry Inc. and Ontodia, Inc.



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Spring 2013

March 20-22  
NYU ITP









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